Superior mesenteric artery aneurysm reconstruction

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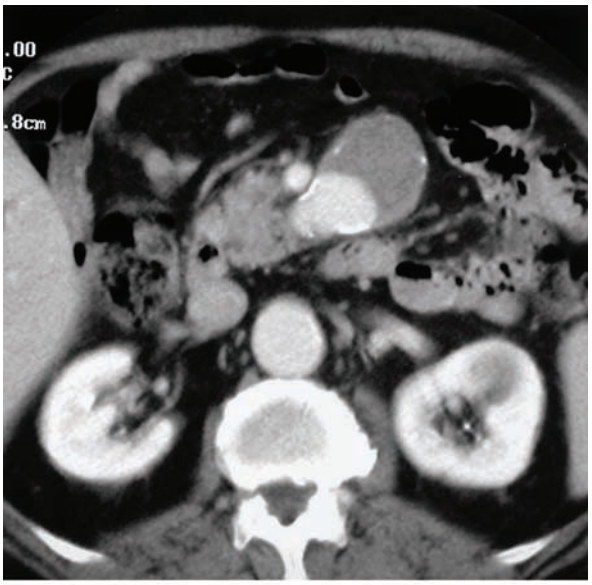
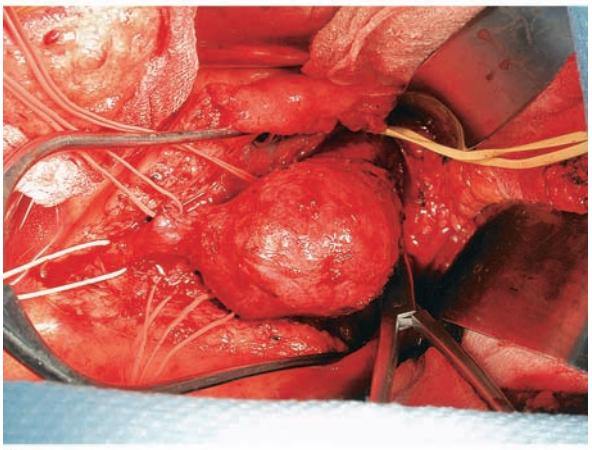
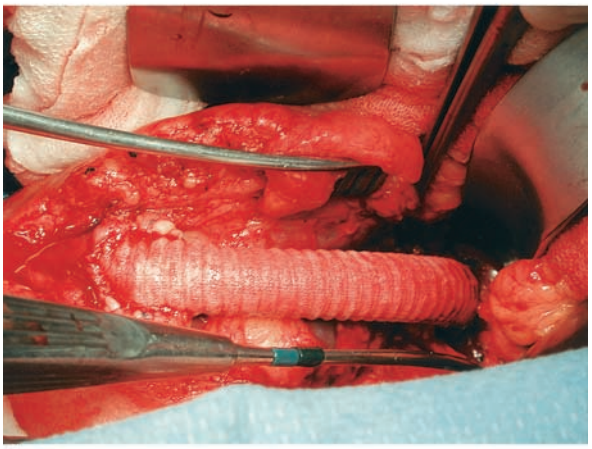
A 77-year old man was found to have an asymptomatic, pulsatile abdominal mass during routine physical examination. Subsequent computed tomography scan showed a 3.5-cm abdominal aortic aneurysm, bilateral common iliac artery aneurysms (2.5 cm and 3 cm), and a 4.2-cm fusiform superior mesenteric artery (SMA) aneurysm (A). The SMA aneurysm started 2 cm distal to its origin off the aorta and involved several patent jejunoileal branches. The celiac artery had no evidence of occlusive or aneurysmal disease. The patient denied any symptoms of chronic mesenteric ischemia or any family history of aneurysms. His medical history was notable only for hypertension. Physical examination was unremarkable except for an easily palpable, mobile, nontender pulsatile abdominal mass.

Elective repair of the SMA aneurysm was performed. Through a midline incision, the small bowel mesentery was incised directly over the easily visible anterior prominence of the aneurysm (B, Cover). There were two small jejunoileal branches that originated from the posterolateral aspect of the midportion of the aneurysm, but most of the branches were clustered distally near the terminal ileocolic branch. Proximal dissection extended to the aorta to expose the neck of the aneurysm, which was fairly long and included the origin of a large inferior pancreaticoduodenal artery (IPDA). A standard aneurysmectomy was performed with direct in-line reconstruction using a 12-mm polyester graft, with beveled anastomoses proximally to include the IPDA origin and distally to include the cluster of jejunoileal branches (C). The patient was discharged on the fifth postoperative day. At 17 months, he remains alive and well, eating normally and maintaining his weight. Noninvasive duplex ultrasound evaluation of the bypass graft shows normal velocity without evidence of stenosis.



A


B, *cover*


C

DISCUSSION

SMA aneurysms are the third most common type of splanchnic artery aneurysm, after splenic and hepatic. Although it has been reported in the past that most of these were mycotic, more recent case series show that most SMA aneurysms are "atherosclerotic" or degenerative in etiology. Because these aneurysms are rare, their risk of rupture is ill defined, but it may approach 40%.[1] In view of this, a reasonable recommendation can be made for elective repair of such aneurysms larger than 2.5 cm in patients who are at good surgical risk. Endovascular repair with a stent graft could be considered in a higher-risk patient, but involvement of multiple jejunoileal branches would likely preclude this approach.

REFERENCE

1. Stone WM, Abbas M, Cherry KJ, Fowl RJ, Gloviczki P. Superior mesenteric artery aneurysms: is presence an indication for intervention? J Vasc Surg 2002;36:234-7.

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